

From the above one will see that the name *Calopogon pulchellus* is directly based on *Limodorum tuberosum*. All of the authors dealing with the two plants (Salisbury, Willdenow and R. Brown) treated them as the same. The name is one arising from Salisbury's habit of renaming plants, so feelingly characterized by Messrs. Fernald and Weatherby. Under the American code of nomenclature the name of our pretty orchid is *Limodorum tuberosum*. Under the Vienna code one is told that one must substitute the very poorly published name *Calopogon* for the older and very carefully described *Limodorum*. This is certainly an excellent illustration of how carelessly that code was prepared. But even under the Vienna code the name of the species is not *Calopogon pulchellus* but is *Calopogon tuberosus* (L.) B.S.P.

MAPLEWOOD, NEW JERSEY.

THE ARCTIC VARIETY OF ALOPECURUS AEQUALIS.

M. L. FERNALD.

THE plant of north temperate regions which passes in America either as *Alopecurus aristulatus* Michx. or as *A. geniculatus*, var. *aristulatus* (Michx.) Torr. has abundant characters to distinguish it from *A. geniculatus* L. of Eurasia, a species locally naturalized in North America. These characters have been clearly set forth by Bicknell¹ and by St. John² and, briefly enumerated, are as follows: more delicate habit, glaucous or pale-green color, less geniculate or depressed culms, less inflated sheaths, longer and more slender pale spikes with spikelets only about 2 mm. long, short straight awn about equaling to barely exceeding the glumes and attached near the middle of the lemma, anthers 0.5–1 mm. long, yellowish; the coarser European *A. geniculatus* having, as its name implies, geniculate stems, a full green color, inflated sheaths, coarser and commonly darker spikes with spikelets about 3 mm. long, a long-exserted and twisted awn attached near the base of the lemma, and brown or purple anthers 1.5–2 mm. long.

to Robert Brown, and forms no part of the history of the name *Calopogon pulchellus* as given by Brown. It is, however, the only basis for the erroneous authorship (*Calopogon pulchellus* (Sw.) R. Br.) given in Gray's Manual, 7th Ed., p. 312. It is also most probable that Willdenow had the name of Swartz in mind, although he does not directly say so.

¹ Bicknell, Bull. Torr. Bot. Cl. xxxv. 472 (1908).

² St. John, RHODORA, xix. 165 (1917).

Although the specific distinctions of the two plants are now well understood, the correct name for *A. aristulatus* seems to have been missed by American students of the group. In Eurasia, where the species occurs and where it is now generally maintained as distinct from *A. geniculatus* L., it long passed as *A. fulvus* Sm. Engl. Bot. xxi. t. 1467 (1805), but since *A. aristulatus* Michx. Fl. Bor.-Am. i. 43 (1803) antedates Smith's name, Michaux's binomial has been used in America. A still earlier specific name, however, is *A. aequalis* Sob. Fl. Petrop. 16 (1799). Sobolewski described *A. aequalis* as differing from *A. geniculatus* in having "Aristis gluma aequalibus," the most important diagnostic character of *A. aristulatus* (or *A. fulvus*), and for practically a century *A. aequalis* was cited in Eurasian literature as a synonym of *A. fulvus*. Recently, however, with the impulse to more exact application of priority-principles, the name *A. aequalis* has been revived in Europe by such close students of nomenclature as Schinz & Thellung,¹ Britton & Rendle,² Druce,³ Hanbury⁴ and Lindman⁵ and we should fall in line by accepting for *Alopecurus aristulatus* Michx. (1803) or *A. fulvus* Sm. (1805) the earlier name, *A. AEQUALIS* Sob. (1799).

During the past summer, on the Straits of Belle Isle, Messrs. Long, Wiegand and I became much interested in an aquatic *Alopecurus*, which we found in tundra-pools on both the Newfoundland and the Quebec sides of the Straits. In the first region the plant, with its long ribbon-like leaf-blades floating on the water, suggested *Glyceria fluitans* or *G. borealis*; in the second region, the pool had dried away and the repent stems sprawled loosely on the ground. Both plants, although having very short and scarcely or but slightly exserted panicles only 0.7–3.5 cm. long, have the more important technical characters of *A. aequalis*: small spikelets, short awn inserted high upon the lemma and small pale anthers; but they differ at once from it in their lax habit, short and inflated sheaths and included or but slightly exserted short spike. In all these characters they exactly match the Greenland plant which was set off in 1880 as *A. geniculatus*, var. *natans* J. Vahl. The variety was published by Lange from a manuscript description of Vahl's. Under *A. geniculatus* Lange said:

¹ Schinz & Thellung, Bull. Herb. Boiss. 2me sér. vii. 396 (1907); Viertelj. Naturf. Gesells. Zürich, lxvi. 291 (1921).

² Britten & Rendle, List Brit. Seed-Pl. and Ferns (1907).

³ Druce, List Brit. Pl. (1908).

⁴ Hanbury ed., Lond. Cat. Brit. Pl. ed. 10 (1908).

⁵ Lindman, Svensk Fanerogamfl. 74 (1918).

“Forma groenlandica hujus speciei excellit thyrsos valde abbreviato, saepius vix ultra vaginam superiorem exserto, foliis infer. longe fluitantibus. Haec ut varietas *natans* designata est a beat. J. Vahl (mscr. ined.).”¹

Lange cited seven collections, three of which are represented in the Gray Herbarium. These and material from Iceland perfectly match the specimens secured by us in pools near the Straits of Belle Isle, and later material of the Greenland plant (Disco, August, 1923, *Porsild*) in a less aquatic form is a good match for St. John's plant from Brest on the Labrador Peninsula, St. John's material being of the emerged phase of the plant.

This plant of Iceland, Greenland, northern Newfoundland and eastern Quebec, with the technical characters of *Alopecurus aequalis*, but differing at once from the common plant of more southern latitudes in habit, sheaths and size and degree of exertion of spike is, then, unquestionably *A. geniculatus* var. *natans* J. Vahl. It is most probable, however, that it was published under the identical name in 1812 from Lapland, Wahlenberg's description under *A. geniculatus* reading:

“β. *natans*: culmo ramoso, foliis natantibus, glumis obtusissimis . . . natat in lacubus sylvarum pasim.”²

That the Lapland *A. geniculatus*, var. *natans* Wahlenb. and the plant of Greenland (*A. geniculatus* var. *natans* J. Vahl) are identical is indicated by Simmons who, taking them up as *A. aristulatus*, var. *natans* (Wahlenb.) Simmons,³ stated that “In den Herbarien liegend zahlreich Exemplare aus dem nördlichen Schweden und Norwegen vor, ferner auch aus Sibirien und Grönland.”

Under the earliest specific name this arctic variety becomes

ALOPECURUS AEQUALIS Sob., var. ***natans*** (Wahlenb.), n. comb. *A. geniculatus*, β. *natans* Wahlenb. Fl. Lapp. 22 (1912); also (independently) J. Vahl in Lange, Consp. Fl. Groenl. 156 (1880). *A. aristulatus*, var. *natans* (Wahlenb.) Simmons, Arkiv för Bot. vi. no. 17: 4 (1907). *A. aristulatus*, var. *Merriami* St. John, Vict. Mem. Mus. Mem. 146: 42 (1922) at least in part, perhaps not *A. Howellii*, var. *Merriami* [misspelled *Merrimani*] Beal, Grasses N. A. ii. 278 (1896). Distinguished by lax habit; stems often repent or floating: leaf-sheaths inflated; the upper 1–5 cm. long: spikes 0.7–3.5 cm. long, often purple-tinged; the base included in the sheath or finally exerted 1–5 cm.—Northern Norway and Sweden, Siberia, Iceland, Greenland,

¹ Lange, Consp. Fl. Groenl. 156 (1880).

² Wahlenb. Fl. Lapp. 22 (1812).

³ Simmons, Arkiv. för Bot. vi. no. 17: 4 (1907).

northern Newfoundland and eastern Quebec. The following American specimens are characteristic. GREENLAND: Sarkak, 1870, *Berggren*, July 18, 1871, *T. M. Fries*, August 12, 1921, *A. E. Porsild*; Blavedal, August, 1912, *Th. Porsild*; Brede Dal, S. Disko, August 8, 1923, *A. E. Porsild*; Frederiksdal, August 1, 1889, *Lundstrom*. NEWFOUNDLAND: pool in tundra, Boat Harbor, Straits of Belle Isle, *Fernald, Wiegand & Long*, no. 27,505. QUEBEC: exsiccated pond on tableland west of Blanc Sablon, *Wiegand*, no. 27,506; sandy pond-shore, Anse des Dunes, Brest, *St. John*, no. 90,117.

Contrasted with var. *natans* the more southern form of *A. aequalis* has culms more ascending at least above the sometimes submersed base and usually taller: leaf-sheaths only slightly inflated; the upper 3.5–10 cm. long: spikes 2.5–8 cm. long, usually not purple-tinged and finally long-exserted (0.3–2.3 dm.).

St. John identifies with the Iceland and Greenland material the plant of islands of Bering Sea described by Beal as *A. Howellii*, var. *Merriami*. Such material as the writer has seen, some of Merriam's original collection from St. George Island and several sheets collected by J. M. Macoun on St. Paul Island, seem, however, much stiffer and coarser than var. *natans* and to have less inflated sheaths and longer-exserted spikes. Should they eventually prove to be referable to var. *natans* the latter name, of course, must be maintained for them, having unquestioned priority. Some other specimens identified by St. John with the Iceland and Greenland plant because of a purplish tinge in the spikelets, depart from it in all other characters and seem better left with the large southern extreme of *A. aequalis*: such plants as Bourgeau's from Saskatchewan and Shear's no. 1502 from Colorado. Although the color is a fair secondary character it too often breaks down: Porsild's material from Greenland shows some spikes with purple tinge, some without; the aquatic plant of the Straits of Belle Isle is similarly variable.

GRAY HERBARIUM.

FURTHER CASES OF INCONSTANCY IN COLOR-FORMS.—On my place in Wilton, Conn., is a narrow strip between grape-vines and a path. Being on the north of the vines it is very much shaded and little will grow there. For a number of years *Impatiens biflora* has taken possession. I do not remember the flowers at first, but for some years they have been spotless except for a few tiny dots in the "slipper."